What is claimed is:

1. A flywheel for an internal combustion engine including a two-stroke engine in a portable handheld work apparatus, the flywheel comprising:

a body defining an axis of rotation;

a vane configuration on said body for generating a flow of cooling air;

a parallelopipedly-shaped permanent magnet carried by said body for a magnetic ignition system;

said permanent magnet having a short edge, a center edge and a long edge;

said permanent magnet being polarized in the direction of said short edge;

said short edge of said permanent magnet running approximately tangential to the peripheral direction of said flywheel; and,

said long edge of said permanent magnet being aligned approximately parallel to said axis of rotation.

2. The flywheel of claim 1, wherein said flywheel has an elevation (h) measured in the direction of said rotational axis; and, said permanent magnet extends at least over half of said elevation (h).

3. The flywheel of claim 1, further comprising first and second pole shoes arranged on respective sides of said permanent magnet viewed in the peripheral direction.

4. The flywheel of claim 3, wherein each of said pole shoes has

a first end facing toward said permanent magnet and a second end facing away from said permanent magnet; said first end has an elevation (e) measured in the direction of said rotational axis and said second end has an elevation (f); and, said elevation (e) of said first end is greater than said elevation (f) of said second end.

5. The flywheel of claim 4, wherein each of said poles has first and second sides lying in the peripheral direction and said first and second sides are curved toward each other.

6. The flywheel of claim 2, said body including a partition wall and said permanent magnet being fixedly mounted on said partition wall.

7. The flywheel of claim 6, wherein said vane configuration is a first vane configuration on one side of said partition wall and said flywheel further comprising a second vane configuration on the other side of said partition wall.

8. The flywheel of claim 7, wherein said flywheel has an end face transverse to rotational axis; and, said partition wall defines the peripheral surface of said flywheel and said partition wall is at a distance (d) from said end face of said flywheel and said distance (d) is approximately one third of said elevation (h) of said flywheel.

9. The flywheel of claim 6, wherein said partition wall is configured to be widened in the region of said pole shoes and said pole shoes are embedded in said partition wall.

10. The flywheel of claim 1, further comprising a counterweight disposed on said flywheel opposite said permanent magnet.

11. The flywheel of claim 1, wherein said body is a cast part.

12. The flywheel of claim 1, wherein said body is an aluminum pressure-cast part.

13. The flywheel of claim 1, wherein said portable handheld work apparatus is a motor-driven chain saw, cutoff machine or the like.